Atypical Presentation of Spinal Epidural Abscess—Prolonged and Intractable Abdominal Pain

Cheng-Chih Lin[1], Chang-Pan Liu[1,2], Chun-Ming Lee[1,2]*, Hsiang-Kuang Tseng[1], Wei-Sheng Wang[1], Chen-Feng Kuo[1]

[1]Division of Infectious Disease, Department of Internal Medicine, Mackay Memorial Hospital, and [2]Mackay Medicine, Nursing and Management College, Taipei, Taiwan.

SUMMARY

Despite advances in medicine, early diagnosis of spinal epidural abscess remains a challenge to clinicians. The most common symptoms of spinal epidural abscess include back pain, fever, and neuralgic deficits. However, spinal epidural abscess can also present with vague and nonspecific symptoms. In this case, a 68-year-old male had abdominal pain in the right upper quadrant lasting 3 weeks and was diagnosed with a gastric ulcer. After treatment, his symptoms did not resolve. Fever and back pain became evident as his disease progressed, followed by right lower limb weakness and the inability to walk. He was taken to the emergency department of our hospital, and the weakness of his lower extremities worsened during hospitalization. His right leg became completely paralyzed despite the use of intravenous antibiotics. A spinal computed tomography scan was performed emergently (magnetic resonance imaging was unavailable) and revealed an epidural abscess involving T5–6 with adjacent osteomyelitis. The patient underwent posterior decompressive laminectomy with pus drainage in the T4–7 region. His neuralgic examinations improved soon after the operation, but ambulation remained limited. Early diagnosis is crucial to the prognosis of spinal epidural abscess, because delayed diagnosis usually results in complete paralysis even death. Thus, clinicians should be aware of atypical presentations of spinal epidural abscess. [International Journal of Gerontology 2009; 3(4): 244–247]

Key Words: abdominal pain, epidural abscess, osteomyelitis

Introduction

The early diagnosis of spinal epidural abscess (SEA), first described by Morgagni[1] in 1761, remains a challenge to clinicians despite advances in medical knowledge, imaging studies and surgical techniques[2,3]. The incidence of this disease was approximately 0.2–2 cases per 10,000 hospital admissions two decades ago[4]; however, the number has doubled in the last 20 years because of the increases in the aging population, increased use of spinal instrumentation, and the spread of injection drug use[2,5,6]. Most patients with SEA have predisposing conditions including diabetes, chronic liver disease, immunocompromised condition, intravenous drug use, spinal surgery or trauma, and a systemic source of infections[2,3,7–9]. With prompt diagnosis and therapy, SEA can be managed with little associated morbidity. However, the rate of irreversible paralysis or death remains high with a range of 18–31%[4,7,10].

The most common symptoms of SEA include back pain, fever, and neuralgic deficits[2]; however, the clinical triad is present only in a minority of patients[10–12]. This report describes a patient with intractable abdominal

*Correspondence to: Dr Chun-Ming Lee, Division of Infectious Disease, Department of Medicine, Mackay Memorial Hospital, 92, Section 2, Chung-Shan North Road, Taipei 104, Taiwan.
E-mail: suhwanjan@hotmail.com
Accepted: March 4, 2009

pain radiating to the back as the primary symptom of thoracic SEA.

Case Report

A 68-year-old man had history of hepatitis C infection and was otherwise very healthy. He had been admitted to a regional hospital because of right upper quadrant abdominal pain radiating to his back for approximately 20 days. An esophagogastroduodenoscopy examination showed a gastric ulcer. Despite treatment of the gastric ulcer, his back pain became severe. He then visited an orthopedic outpatient clinic for help before admission to our clinic. A thoracolumbar spine X-ray showed degenerative spondylosis (Figure 1). However, even with analgesics, the symptoms did not improve. Unfortunately, progressive weakness in the right leg became prominent. Soon, he was unable to walk. Two days prior to admission to our clinic, he developed fever with worsening pain in the right upper quadrant of his abdomen. There was no evidence of jaundice or abnormal changes in the appearance of his stool or urine.

As the abdominal pain continued to get worse, he was brought to our hospital for help. On admission, the patient's body temperature was 36.6°C. Examination of the abdomen revealed mild tenderness in the right upper quadrant and epigastric region. The patient's neck was slightly stiff and the lower spinal region showed no tenderness. The neurologic examination revealed muscle strength of 5/5 in the upper extremities, 4/5 in the left lower extremity, and 2–3/5 in the right lower extremity. The patient's peripheral white blood cell count was 16,200/mm^3 (90% neutrophils, 3% lymphocytes, 7% monocytes) and the alkaline phosphatase was 148 U/L (laboratory range, 38–126 U/L); albumin was 2.3 g/dL (range, 3.5–5.0 g/dL). The rest of the serum chemistries were normal.

The posteroanterior chest X-ray revealed increased bilateral lower lobe interstitial infiltration. An abdominal X-ray revealed lumbar spondylosis with marked spur formation and distended bowel loops at the upper abdomen. The cervical spine X-ray also revealed spondylosis. Blood and urine cultures were taken. Intravenous oxacillin and ciprofloxacin were given to treat the suspected spinal infection. Abdominal ultrasonography showed chronic liver disease and stones in the dependent portion of the gall bladder.

On day 4 after admission, a physical examination revealed progressive weakness of the left lower extremity (muscle strength, 1–2/5) and paralysis over the right lower extremity. We consulted a neurosurgeon. A spinal lesion at the T5 sensory level with multiple neurologic deficits in both lower extremities was identified. Because magnetic resonance imaging was not immediately available, emergent computed tomography scan of the thoracic spine was performed (Figure 2). Diskitis involving T5–6 with adjacent osteomyelitis was found. Abscess

Figure 1. Spur formation of the thoracic and lumbar spine indicating degenerative spondylosis.

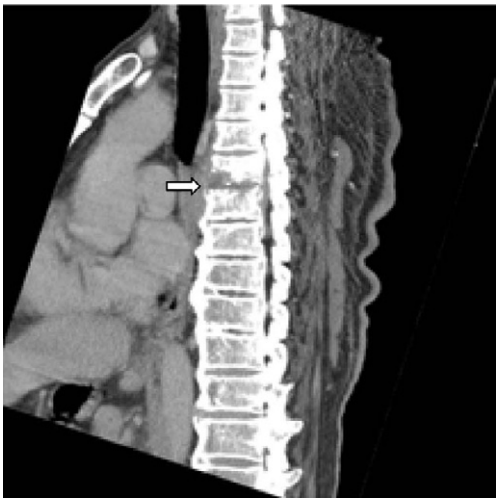

Figure 2. Diskitis involving T5–6 with adjacent osteomyelitis as well as paraspinal and epidural abscess formation (arrow) that resulted in spinal stenosis.